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The National Forests of New
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THE UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
DISTRICT 3



THE NATIONAL FORESTS OF NEW MEXICO

ISSUED BY THE DISTRICT FORESTER, ALBUQUERQUE, N. M.

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THE NATIONAL FORESTS OF NEW MEXICO

There are nine National Forests in New Mexico, comprising a gross area of approximately ten million acres and bearing a timber stand of fifteen billion board feet of lumber and other forest products. These areas are set aside and administered by the Government with the purpose of insuring a permanent timber supply and to prevent the destruction of forest cover which regulates the flow of streams. The National Forests of New Mexico provide for a permanent lumbering industry; supply material for the development of ranches, farms, and cities; protect the watersheds essential to agricultural development; add stability to the livestock industry; promote the development of facilities for transportation and communication on the Forest areas, and contribute through the receipts derived from their administration to the road and school funds of the counties in which they are situated. Mining, agriculture, and all other uses of the Forest areas not incompatible with their primary purpose, are encouraged by the Forest Service.

The timber resources of the New Mexico National Forests, under forest management, are estimated to have a present annual productive capacity of about eighty million board feet of lumber, sufficient to build each year 8,000 homes for the people of New Mexico, without diminishing the stand or forest capital. This annual production may be confidently expected to largely increase with the practice of better methods of management. The watersheds which the Forests protect affect the flow of most of the important streams in the state, and all of the larger irrigated districts derive a large part of their water supply from the National Forests. The greatest enemy of the timber and water supply of New Mexico is fire. Before the creation of the National Forests, forest fires destroyed millions of feet of timber annually in New Mexico. But now, with its system of lookout towers, telephone lines, and trails, the Forest Rangers are enabled to detect and reach all fires with great promptness, and over ninety per cent are extinguished before they have covered ten acres.

The Forest ranges of New Mexico are a large factor in the livestock industry of the state—98,761 head of cattle and horses and 829,729 head of sheep and goats were grazed during the season of 1914 for a nominal fee per head. The grazing regulations of the Forest Service protect the small stockmen and are aimed to produce an equitable distribution of grazing privileges and a permanent grazing industry. Under scientific management the productive capacity of the Forest ranges is increasing each year through the development of watering places, the construction of range improvements, and the improvement of the forage crop.

The Forest Service is rapidly improving transportation and communication facilities on the New Mexico Forests. It has built 1,000 miles of telephone lines, 64 miles of roads, and 960 miles of trails for the purpose of facilitating administration and protection of the forest areas. Its annual receipts are at present about \$135,000.00 for New Mexico, and twenty-five per cent of this fund, or \$33,750.00, is turned into the county funds for roads and schools. An additional ten per cent has by law been made available to the Forest Service for use in constructing additional roads and trails. This fund now amounts to about \$13,500 per year, and 47 miles of road have been constructed with it on the Forests of the state during the two years for which it has been available. With the steadily increasing receipts, these funds which accrue directly to the benefit of the state will correspondingly increase from year to year.

The National Forests of New Mexico offer excellent business opportunities to stockmen and lumbermen who are seeking a location for their business. With the general development of the state, new bodies of timber are becoming marketable, concerning which the Forest Service furnishes definite information to prospective purchasers. On some of the New Mexico Forests are found extensive areas of excellent summer range for which the Forest Service is desirous of issuing grazing permits to settlers who meet the requirements of the Regulations governing the allotment of grazing privileges.

In addition to the purely economic resources of the New Mexico Forests, they have a large and increasing value in the attractions which they offer to travellers, sportsmen, and health seekers, and in their increasing popularity with the people of New Mexico and adjacent states as a location for summer homes. This value for travel, sport, and recreation is largely dependent on a proper preservation of their scenic beauty, the develop-

ment of roads and trails to make them accessible to the public, the protection of their historical and archaeological monuments and ruins, and the conservation of their fish and game. It is the definite aim of the Forest Service to accomplish these ends, and to encourage the full use of the Forests for purposes of recreation and public health. Few people are aware of the delightful climate, the extraordinary scenery, the wealth of historical and archaeological interest, and the facilities for sport, rest, and recreation which are offered them in the mountains of New Mexico. In fact many people who have seen New Mexico only from the transcontinental trains have the impression that it is largely desert and quite without forests of any description. This is because the railroads, in order to avoid grades, naturally avoid the mountain ranges and seek the lowest elevations.

The future will see a greater appreciation of the possibilities of the New Mexico Forests as a summer playground, and together with their steadily developing economic resources, will enable them to contribute an increasing share to the well-being and prosperity of the state.

THE ALAMO NATIONAL FOREST*

In southern New Mexico, extending north and south between the valleys of the Rio Grande and the Pecos, are the Sacramento and Guadalupe Mountains. Almost surrounded by great expanses of treeless plains, the wooded slopes of these mountains provide resources of timber and water which are of vital importance to the general development, and particularly to the agricultural development, of the southern portion of the State of New Mexico. On the flanks of these mountain ranges lies the Alamo National Forest. The administrative headquarters is at Alamogordo in winter, and at Cloudercroft, New Mexico, during the summer.

The Alamo National Forest consists of two divisions, the first of which comprises the Sacramento Mountains. The crest of these mountains is an elevated plateau with an average elevation of 9,400 feet. On the west, this plateau descends by two precipitous escarpments to the Tularosa desert, and its western drainage includes several small streams which furnish water for the irrigation of the fruit and alfalfa farms which support the towns of Alamogordo, La Luz, Tularosa, High Rolls and Mountain Park. One of these streams also supplies the town of Alamogordo with water for municipal purposes.

Toward the east, the Sacramento Mountains are drained by a series of long forested canyons which unite to form the Rio Penasco, an important tributary of the Pecos River, and the source of irrigation water for about ten thousand acres of cultivated land along the Penasco Valley. Undoubtedly the eastern watershed of the Sacramento Division also exerts an active influence on the Pecos River, in that indiscriminate cutting and over-grazing of the upper Penasco watershed, which is now prevented by its administration as a Forest, would result in serious silting of the Carlsbad Irrigation Project, which in turn would prejudice development of the great agricultural region reclaimed by it.

In addition to the evident watershed value of the Sacramento Division is its distinct value as a source of timber to the agri-

*Situatcd in Otero, Eddy, and Chavez Counties.

cultural communities of the Pecos Valley. The development of necessary transportation facilities will make available to these communities the Forest resources of this division, which are estimated at one hundred and seventy-five million board feet of lumber and one million cords of wood, of which, due to inadequate transportation facilities, only about 1,111,000 feet are cut annually.

No other section of New Mexico is attracting so many summer residents as the Sacramento Mountains. This summer population centers in the resort at Clouderoft, which is located on the crest of the Sacramento Range and reached by a branch line of the E. P. & S. W. Railroad. Many people from El Paso and the hot plains of western Texas spend their summers in these mountains, and with the continued development of facilities and transportation there is no doubt that the popularity of this region as a resort will rapidly increase and make possible a full utilization of its possibilities for summer recreation and public health purposes.

The Guadalupe Division of the Alamo National Forest, like the Sacramento Division, drains largely to the eastward towards the Pecos River. As in the case of the Sacramento Mountains, the proper administration of the Guadalupe Division is essential to prevent damage to the agricultural communities of the Pecos Valley. While the Guadalupe Division contains only a small quantity of sawtimber, its stands of cord wood and fence post material are particularly important by reason of their comparative proximity to the Pecos Valley.

The grazing ranges of the Alamo National Forest afford pasturage for over 10,800 head of cattle and horses, and 8,000 head of sheep and goats. A considerable proportion of this stock is dependent upon artificial watering places, especially in the Guadalupe Mountains, and the development of these watering places is being encouraged and extended by the Forest Service. Agriculture is successful in certain of the narrow valleys within the Forest, but almost all of these lands are already covered by homestead entries. One hundred and ninety tracts have been listed for entry to settlers by the Forest Service under the Forest Homestead Act.

Although a considerable proportion of the area embraced within the Alamo National Forest has been alienated and passed into private ownership before the creation of that Forest, the remainder, which is in Government ownership, will doubtless see a great future development of its timber and recreational re-

sources and improvement of its grazing ranges, at the same time continuing to protect watersheds which vitally affect the development of southern New Mexico.

THE CARSON NATIONAL FOREST*

Situated in the extreme north central part of New Mexico, the Carson National Forest, embracing a gross area of 1,123,400 acres more closely resembles the mountainous regions of Colorado than those of New Mexico and Arizona. The Forest area lies in three divisions known as the Amarilla, Taos, and Jicarilla Divisions, and is administered with headquarters at the historic town of Taos, the home of the famous scout and pioneer Kit Carson, after whom the Forest is named.

The Carson National Forest is an area of large economic importance, and of intense and varied interest. Its comparatively ample rainfall and heavy winter snows give rise to many streams which form a part of the head waters of the Rio Grande and San Juan Rivers, and its watersheds accordingly bear an important relation to the agricultural communities whose water supply is dependent upon those two streams. The timber resources of the Carson National Forest are also of considerable magnitude, the total stand being estimated as a billion and a quarter board ft. of lumber, and over seven hundred thousand cords of wood, of which about 1,546,000 board ft. of lumber, railroad ties, and other Forest products, were cut during the year ending July 1, 1914. These timber resources are in process of very rapid development, and at present supply six active sawmills with the material for their operation. One of these is one of the largest sawmills of the Southwest, and is operated in connection with fifty miles of especially constructed railway lines.

The extensive grazing resources of the Carson Forest are fully utilized by the large population of the numerous small towns included within and adjacent to the Forest boundary. Permits were issued for the grazing season of 1914 for a total of 5,444 cattle and horses and 156,021 sheep and goats, and in addition many thousands of milk and work animals are grazed free of charge on the Forest ranges by local settlers. The region of the Carson Forest is one of the oldest settled regions in the United States, and although it has been used for grazing for hundreds of years, there is every indication that under the ad-

*Situated in Rio Arriba and Taos Counties.

ministration of the Forest Service, the Forest area will continue to support an equal or even greater number of stock than is at present permitted. There are a few small areas not now utilized consisting of rough mountain range suitable for the summer grazing of cattle which offer a good opportunity for settlers desiring to enter the stock business.

A small amount of land at the lower elevations is chiefly valuable for agriculture. This land is in heavy demand and was mostly taken up before the creation of the Forest. Almost the entire remainder is included in 315 tracts listed to settlers under the Forest Homestead Act.

Hardly second in interest to the considerable economic resources of the Carson National Forest are its historical and archaeological monuments, and its value for purposes of recreation and public health. In addition to many historic and prehistoric monuments and ruins included within the general region, there are found on the high mountains excellent fishing streams and scenic and climatic attractions which will in the future result in a full development of these resources. At present, the comparative inaccessibility of many attractive parts of the Carson National Forest has largely confined travelers to visiting the adjacent town of Taos, which has become famous for its Indian Pueblo, its picturesque Indian festivals, its historic buildings and traditions, and for its colony of American artists.

THE CHIRICAHUA NATIONAL FOREST*

The Chiricahua National Forest occupies the summits of several small mountain ranges in the extreme southwest corner of New Mexico, and the southeast corner of Arizona. It has a gross area of about half a million acres, and bears a timber stand estimated to be over two hundred million board ft. of lumber, and nearly two million cords of wood. The sawtimber is principally western yellow pine and Douglas fir, while the cord wood is largely oak, juniper and pinon. The Forest area is exceptionally rough and mountainous, and in addition to the value of its timber to the large treeless areas surrounding the Forest, the protection of its watersheds is a vital and an important factor in the maintenance of the underground water on which the great agricultural valleys of Playas, Animas, San Simon, Sulphur Springs, and San Pedro are becoming increasingly dependent. In fact it has been demonstrated that the depth of the water table of at least one of these valleys is largely in direct proportion to the distance from the Forest watershed.

The Chiricahua National Forest is administered with headquarters at Portal, Arizona. The principal industry at present is the grazing of cattle, which occupy the Forest range during most of the year. Permits are issued for a total of 10,900 head of cattle and 900 goats. A total of 639,000 board ft. of timber was cut during the year ending July 1, 1914.

A few limited areas of open land within the Forest are more valuable for agriculture than for the production of timber, and 50 tracts of such land have been listed to settlers by the Forest Service under the Forest Homestead Act.

There are a few areas of unutilized range on the Chiricahua Forest which offer fair opportunities to stockmen willing to develop water and secure grazing privileges under the Forest Regulations.

*Situated in Grant County, and in Cochise County, Arizona.

THE DATIL NATIONAL FOREST*

The Datil National Forest is the largest Forest in New Mexico, as well as one of the richest in opportunities for future development. It is composed of five divisions embracing the Mogollon, San Mateo, Datil, Tularosa, Elk, Gallina, Magdalena and San Francisco Mountain chains of west central New Mexico, and includes a gross area of nearly three million acres, administered with headquarters at Magdalena.

It is particularly valuable as a watershed, lying on the head waters of the Gila and Salt Rivers, whose importance to the agricultural interests of both Arizona and New Mexico is too well known to require comment. The head waters of these rivers are derived from the mountainous country adjacent to the Arizona state line, which gives rise to numerous living streams. The east portion of the Forest is comparatively dry and its importance as a water shed is accordingly less.

The timber resources of the Datil National Forest are enormous, but on account of their present inaccessibility, have hardly begun the great process of development which is bound to take place in the future. The total stand is estimated at about three and a half billion board ft. of lumber, and five million cords of wood, the sawtimber being principally western yellow pine, Douglas fir, and Engelmann spruce, while the cord wood is pinon, juniper and oak. The few parts of this vast body of timber which are at present accessible supply material for two active sawmills which cut about 720,000 ft. of lumber each year, all of which is absorbed by the immediately adjacent communities. That the timber resources of the Datil National Forest can and will in the future sustain indefinitely a great lumbering industry is hardly open to question, and the development of this industry will begin immediately upon the construction of railroads into the vicinity of the Forest area.

An extensive and thriving live stock industry is supported by the forage resources of the Datil National Forest. Permits for the grazing season of 1914 were issued for a total of 32,801 cattle and horses, and 108,541 sheep and goats, and under the

*Situated in Socorro and Sierra Counties.

system of scientific range management which has been inaugurated by the Forest Service in cooperation with the resident stockmen there is every indication that these numbers of stock can be indefinitely supported on the grazing ranges of this Forest.

A few of the mountain valleys and open lands at the lower elevations are chiefly valuable for agriculture. A large part of these lands were entered by homesteaders before the creation of the Forest, and 199 additional tracts have been listed by the Forest Service to settlers desiring to make entry under the Forest Homestead Act.

The extensive live stock industry which is already supported by the Datil National Forest, the beneficial effect of the conservative administration of the head waters of its important streams, together with the certainty of a great development of its timber resources in the future, makes this Forest one of the most important in New Mexico, and one whose development will continue to be a large factor in the prosperity of the western part of the state.

THE GILA NATIONAL FOREST*

The Gila National Forest, administered from headquarters at Silver City, New Mexico, comprises an area of 1,600,000 acres situated in southwestern New Mexico in the region of the Mogollon, Black, and Diablo Mountain ranges, and includes particularly valuable resources of timber, range, and minerals, in addition to its great importance as a watershed. The Forest area includes the head waters of the San Francisco, Gila and Mimbres rivers, on which large areas in both New Mexico and Arizona are dependent for their irrigation water, and accordingly for their agricultural prosperity. The high mountains of the Gila National Forest are the source of numerous living streams, which afford excellent fishing, and together with the natural scenic beauty of the region and the abundance of game, offer extraordinary opportunities to an increasing number of sportsmen and summer visitors.

A large proportion of the Forest area is covered with exceedingly valuable stands of timber estimated at over two billion board ft. of lumber and eight hundred and seventy-five thousand cords of wood, the sawtimber being western yellow pine, Douglas fir and Engelmann spruce, while the cordwood is largely juniper and oak. Due to inadequate transportation facilities a considerable proportion of the timbered area is at present inaccessible. The annual cut is exemplified by the total quantity cut during the year ending July 1, 1914, which was 4,760,000 ft. of lumber, mine props, and other forest products. The Forest at present supplies the raw material for four active sawmills, but the increasing development of the region will make possible a large extension of these lumbering operations without exceeding the sustained producing capacity of the Forest. Excellent opportunities are offered by this timber, especially to large operators who are in a position to undertake extensive construction of logging railroads.

A very limited area of valley lands at the lower elevations are chiefly valuable for agriculture, and 120 tracts of such land have been listed to settlers under the Forest Homestead Act.

*Situated in Grant and Sierra Counties.

The principal present industries of the Gila National Forest are mining and stock raising, the steady development of which have made the region well known as one of the most productive in the State. Grazing permits were issued during the year 1914 for a total of 28,973 head of cattle and horses, and 24,596 head of sheep and goats. There is every indication that the Forest area will indefinitely support at least these numbers of stock. The mining industry shows every indication of a continuance of prosperity and with the certain future development of its now inaccessible timber resources, as well as a fuller appreciation of the attractions which it offers to sportsmen, travellers, and summer visitors, the Gila National Forest will doubtless contribute to an increasing degree to the prosperity of southwestern New Mexico.

THE LINCOLN NATIONAL FOREST*

The Lincoln National Forest includes three divisions embracing a gross area of 634,160 acres, and is administered from headquarters at Capitan, New Mexico. The Forest area is for the most part rough and mountainous, and the White Mountains which are included within the Lincoln Division of the Forest have a considerable importance as a watershed in that they embrace the head waters of a number of small streams which unite to form the Rio Hondo, a feeder of the Pecos River and the source of water supply for the Hondo Irrigation Project of the United States Reclamation Service, as well as for large areas of irrigated lands situated on the banks of its upper tributaries. Chief among these is the Rio Bonito which forms the water supply for the town of Carrizozo and for a considerable mileage of the E. P. & S. W. and the A. T. & S. F. Railways.

The Lincoln National Forest is estimated to contain one hundred and eighty-two million board feet of timber and about eight hundred thousand cords of wood and sawtimber, the sawtimber being western yellow pine, Douglas fir and Engelmann spruce, while the cordwood is largely pinon, juniper and oak. Due to the absence of adequate transportation and the rugged character of the topography, this timber at present finds only a limited and local market. One sawmill cuts about half a million feet annually to supply a part of the local market. The principal active industry on the Forest is stock raising, the Forest ranges grazing annually about 8,350 head of cattle and horses, and 8,260 head of sheep and goats, owned by approximately 250 stockmen. Agriculture is also successful on some of the limited areas of land within the Forest which are chiefly valuable for that purpose. Two hundred and eighteen tracts of such land have been listed under the Forest Homestead Act.

*Situating in Lincoln and Torrance Counties.

THE MANZANO NATIONAL FOREST*

This Forest comprises eight divisions located on the various mountain ranges of central and western New Mexico, and is administered from headquarters at Albuquerque, New Mexico. The best estimates available place the total stand of timber at four hundred and twenty million board feet of lumber, mostly western yellow pine, Douglas fir, white fir, and Engelmann spruce, and one and a half million cords of pinon, juniper and oak wood. The Forest is divided into four administrative divisions, aggregating 1,253,210 acres.

The first of these is the Manzano-Sandia Division located on the mountain range of the same name, lying to the east of the city of Albuquerque. This division is topographically distinct from the remainder of the Forest by reason of an uplift of the geological formation which exposes the rock strata on its western slope in the form of a precipitous escarpment of about 4,000 feet, a prominent feature of the view from the city of Albuquerque. The long eastern slope, on which most of the timber is located, follows the dip of these strata, thereby causing almost the entire precipitation of the mountain range to drain eastward into the Estancia valley. This valley is approximately 75 miles in length, and was extensively settled about eight years ago. Severe failures of the dry farming methods in use resulted in a check in the development of the region, but it has since been demonstrated that irrigation water may be obtained by pumping at levels varying from 10 to 100 feet below the surface. The future prosperity of the valley would therefore appear to depend on a stable and adequate supply of underground water, and it is certain that most of this water is derived from the National Forest area immediately to the westward, whose careful administration accordingly assumes additional importance through its value as a watershed.

The three remaining divisions of the Manzano Forest located on the San Pedro, Chupedera and Zuni Mountains, also bear valuable stands of timber, about eight million board feet of

*Situating in Torrance, Socorro, Santa Fe, Bernalillo, Sandoval, McKinley, and Valencia Counties, and in Apache County, Arizona.

which was cut during the year ending July 1, 1914 by two active mills. The Manzano National Forest is also an important grazing region, affording range for approximately 3,150 head of cattle and horses, and 46,420 head of sheep and goats each year, as well as for a large additional number of cattle, horses and goats grazed free of charge by the settlers and by Zuni and Navajo Indians. The Forest is comparatively densely populated, about 3,000 people being directly dependent on its resources for their immediate livelihood, and a much greater number for fuel and timber supply. Most of the areas on the Manzano Forest more valuable for agriculture than for timber production were taken up before the creation of the Forest under the Homestead Law and the Small-Holdings Act. The remaining areas within the Forest which are chiefly valuable for agriculture have been largely taken up under the Forest Homestead Law, 320 tracts of such land having been listed to homesteaders within the Forest to date of July 1, 1914.

THE SANTA FE NATIONAL FOREST*

In northern New Mexico on either side of the valley of the Rio Grande lies the Santa Fé National Forest, embracing a gross area of 1,457,760 acres administered from the Forest headquarters at the historic town of Santa Fé.

The watersheds of this Forest, supplying important feeders to the waters of the Rio Grande and embracing the head-waters of the Pecos River, bear a most important and beneficial relation to the irrigated agricultural regions tributary to those two streams.

In addition to its obvious value to the watersheds of the Rio Grande and the Rio Pecos, the Santa Fé National Forest embraces timber resources which are only beginning to be developed, and which will in the future be an important factor in the timber supply of the Southwest. The total stand is estimated to be over two and a half billion board feet of lumber and five hundred thousand cords of wood. Of this 5,207,000 feet were cut during the year ending July 1, 1914. Great bodies of this timber will sustain a very much greater annual cut as soon as they can be made accessible by the extensive railroad construction which will be necessary to reach them. This Forest at present supplies material for 8 active mills. Excellent opportunities are offered, especially by the timber on the Jemez Division, to prospective purchasers of timber who are prepared to undertake large and extensive operations.

The grazing resources of this Forest are also of very considerable importance, permits having been issued for the season of 1914, for a total of 9,201 head of cattle and horses and 91,944 head of sheep and goats. Most of these animals are permitted to the settlers of the adjoining valleys. There is at present considerable excess range, especially on the Jemez Division, which offers an excellent opportunity for settlers desiring to enter the stock business and to secure grazing privileges under the Forest Regulations. The forage on the excess range is largely mountain bunch grass, which is best adapted for the summer grazing of cattle and horses.

*Situated in Mora, San Miguel, Santa Fe, Sandoval, Rio Arriba, and Taos Counties.

While important for its economic resources and watershed value, the Santa Fé National Forest is most widely known by reason of its cliff dwellings and other ancient ruins, and its popularity as a summer resort. The archaeological interest of the region centers largely in the cliff dwellings of the Jemez Division, while its best known historical monuments are found in the ancient city of Santa Fé, formerly the capital of the Spanish province of New Mexico, and famous in American history as the terminal of the Santa Fé Trail. The present development of the recreational resources has taken place largely on the headwaters of the Pecos River on the Pecos Division. Here are found a number of hotels for the accommodation of tourists, while the excellent fishing and the delightful climate and scenery are attracting a growing colony of summer cottagers. With the extension of transportation facilities and the growing appreciation of the advantages offered by these Forests to travellers, sportsmen and seekers after health, a rapid development of their resources as playgrounds is taking place.

The Pecos and Jemez country is the oldest settled region in the United States, and most of the limited areas within the Forest which are chiefly valuable for agriculture were appropriated long before the creation of the Forest. Almost the entire remainder have been listed to settlers under the Forest Homestead Act, 350 such tracts having been listed prior to July 1, 1914.

